three large, and a group of smaller setæ on joints 6 and 12, three large and other very rudimentary ones on joints 5 to 11. This is a most interesting variation as foreshadowing the condition of the more specialized species where but three setæ remain.

EXPLANATION OF PLATE VIII.

Tortricidia testacea.

Fig. 1. Larva, stage I, dorsal view, enlarged.
" 2. Larva, stage IV, dorsal view, early in the stage.
" 3. The same, later in the stage.
" 4. Larva end of stage V.
" 5. Larva end of stage VI.
" 6. *T. testacea*, imago.

Tortricidia pallida.

Fig. 7. Side view of mature larva.
" 8. Larva end of stage IV (compare fig. 2).
" 9. Larva end of stage V (compare fig. 4).
" 10. Larva end of stage VI (compare fig. 5).
" 11. Larva stage VII (compare this JOURNAL, IV, pl. VI, figs. 6 and 7).

LIFE-HISTORY OF CALYBIA SLOSSONIÆ.

BY HARRISON G. DYAR.

I am able to present descriptions of the remaining stages of this larva which, with those previously given by me, will complete the life-history. The previous article may be amended as follows:

This JOURNAL, V, p. 123, line 1, read . . appendages of nearly equal length at maturity, the anterior ones a little shorter, but in stages II and III of unequal length as in *Phobetron*. Page 124, line 1 for "except that this character may not be primary," read: except that this character is a secondary adaptation.

Add: I have recently received a specimen of this species from Mr. Graef labeled "Texas."

DESCRIPTION OF THE SEVERAL STAGES IN DETAIL.

Egg.—Add: duration of this stage six days; 15 days in a cold room in New York.

Stage I.—Add: the dorsal and subdorsal brown lines are broken, existing as dashes on the weak segments 4–5, 7, 9 and 11; a slender brown marking between the horns of 4 and 13. Later a milky white shade along the subdorsal ridges, joining at the ends. Length, 1 to 1.5 mm.

Stage II.—Elliptical, flattened, dorsal space broad, level with the laterally extended horns; side area small. Horns 3, 4, 5, 8, 10, 12 and 13 short, tapering, as long as the width of the dorsum, those of joints 7, 9 and 11 very short, conic, less than half as thick and about one sixth as long as the others. Long horns with many fine, flexible, spinulose white hairs toward tip, but above and at base mixed with smooth straight setæ with dark tips. The short horns bend down and have only smooth setæ; the long horns are all equal. Color uniform translucent whitish green, in some with rounded brown dots on joints 4, 7 and 11 or 4, 7, 9 and 11 dorsally. The side area is covered by the subdorsal horns which are constricted a little at base, but are without separate basal pieces. Skin with clear setiferous granules as at maturity. The larva eats a channel in the leaf, in which it rests, the horns overlapping the uneaten leaf. Length, 1.5 to 3.1 mm. Duration of the stage 5 days.

Stage III.—Shape essentially as in the mature larva, the dorsal groove broad and shallow. Horns of joints 3 to 13 of even length except 7, 9 and 11 which are about half as long or a little over half as long as the others, thick, tapering, constricted near and at base, indicating the rounded basal pieces, but they are not furcate. Hair abundant, fine and spinulated as before with some smooth, dark tipped ones toward bases of horns; primitive setæ ii visible. Color all green, made whitish by the hairs. Skin as before. The horns are slenderer than before and look more numerous as those on the weak segments appear more distinctly. Length, 3.1 to 4.5 mm. Duration of the stage 5 days.

Stage IV.—Much the same. The short horns are now about nine-tenths the length of the others and during the stage they fill out and become almost completely indistinguishable. The hairs are almost all the spinulose ones, only a few of the smooth, black tipped ones remaining. Horns long and slender, a little swollen at base, the basal pieces constricted off and obscurely furcate. Setæ i and ii are distinct, on the basal piece and tip of horn respectively, smooth, dusky. Lateral horns minute, naked, tapering, enlarged at base and once constricted, concealed under the subdorsals. All green, usually no marks, sometimes with the dorsal red spots. The shade varies from leaf green to bluish

green. Head rounded, green with black ocellus and brown mandibles; width .8 mm. The horns are detachable as at maturity. Length, 4.5 to 7 mm.

Stage V.—Shape as in the mature larva, all the horns equal except joints 3 and 4 which are beginning to be a little shorter, that of 3 slightly recurved. Dorsal groove distinct, narrow; basal piece of horns distinct, cordate at base. Horns regularly tapering, rounded at tip, densely clothed with long, fine, white fringe-hairs. There are also some smooth, short, dark-tipped hairs and short, densely feathered, stellate ones especially toward the bases of the horns. Setæ i and ii long, smooth, black. Skin as at maturity. Color soft, clear green, more whitish along the dorsal groove. Nearly all the specimens (35) had lost the red spots at this stage, only one or two retaining them. Length, 7 to 10.5 mm.

Stage VI.—Mature larva. Length, 10.5 to 16.7 mm. The short smooth hairs on the horns represent the long smooth ones of the earlier stages; the short, very feathery hairs are those of the long feathery ones which lie on the dorsal aspect of the horns, made short. The larva here recorded probably omitted one of the normal stages. Probably the penultimate as in *Packardia geminata* (JOURN. N. Y. ENT. SOC. VI, 3).

It was kept very warm and was protected from the chill night air that it would have had on its native river. Consequently it grew very rapidly, probably more so than in nature.

Another larva reached 13.5 mm. before last molt which was doubtless this missing stage. It was like the final stage, but the coloration entirely green.

Food-plants. Add Marlberry (*Ardisia pickeringia*), cocoa plum (*Chrysobalanus icacoa*) and another plant not determined. I am indebted to Mr. F. Kinzel for the names and to Mrs. Slosson for sending leaves to feed the larvæ.

ON THE DIPTEROUS FAMILY SCATOPHAGIDÆ.

BY D. W. COQUILLETT, Washington, D. C.

This family is known in Europe as Scatomyzidæ, but since the genus *Scatomyza* is an admitted synonym of *Scatophaga*, it would appear desirable to change the name of the family to Scatophagidæ. In the